# *Libby Flood Control Operation*

*VARQ in 2007*
*TMT Meeting January 31, 2007*

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# Libby Dam Operations

- 2006 Documentation
  - Final Upper Columbia EIS
  - Public Meeting briefings
  - After Action Report
- January Determination and Finding
- What to Expect in 2007
  - VARQ Flood Control
  - Fish (Sturgeon Operation)
  - Summer Salmon Operation
- Reduced Flexibility in 2007

# 2006 Documentation

- *Final Upper Columbia EIS*

*http://www.nws.usace.army.mil/Template/Display/More_Hot_Topics.cfm?recno=56*

- *Public Meeting at Bonners Ferry September 6, 2006*

*http://www.nws.usace.army.mil/PublicMenu/Menu.cfm?sitename=PUBLICAFFAIRS&pagename=SpringEvent2006*

- *Public Meeting at Bonners Ferry November 6, 2006*
- *After Action Report posted on the web page above*

# January Determination and Finding

- Signed by General Martin January 5, 2007

http://www.nws.usace.army.mil/PublicMenu/documents/PUBLICAFFAIRS/Libby_Decision_Document_07.pdf

- This is a one year decision
- Operate in accordance with the VARQ procedures such that there will be no reduction in flood storage capability

# What to Expect in 2007

- *VARQ Flood Control*
- *Adhere to the VARQ procedures*
- *Draft through March using VARQ SRD*
- *Begin VARQ refill outflow at Libby 10 days prior to the ICF*
- *VARQ outflow will be calculated each week*
- *VARQ outflow will not be reduced except for one or two days to protect human life and safety*
- *Manage to avoid exceeding a stage of elevation 1764 feet at Bonners Ferry to the extent practicable*

# What to Expect in 2007

- *Sturgeon Operation*
- *Meet the volume recommended for the sturgeon tier*
- *Current WSF is 6.995 MAF (110%)*
- *The corresponding tiered volume is 1.169 MAF (approximately 28 days at full powerhouse)*
- *Discussion will be initiated to determine the 2007 sturgeon flow operation*

# Reduced Flexibility in 2007

- *VARQ refill outflow will begin on schedule ten days prior to the Initial Controlled Flow (ICF) at The Dalles*
  - *If the ICF date is computed to be later, VARQ outflow may be reduced during the next calculation*
  - *If the ICF date is earlier, VARQ outflow may be greater and spill may be needed to meet the flow*
- *Start of Sturgeon flow will be coordinated through the TMT*

# Reduced Flexibility in 2007

- Refill in 2007 may not be as likely as it was in past years
- The UCEIS was based on refill by July 31
- The refill probability in the UCEIS included the double peak operation nearly half the years modeled
- To reduce the double peak reduces the refill probability further than that modeled

# *VARQ operations can have fish flows overlaid –*

# *Impact to refill was characterized in UCEIS*

*(LV1 is Libby Operation with VARQ flood control and a sturgeon operation at full powerhouse outflow. LV2 is Standard Flood Control with full powerhouse plus 10,000 cfs)*

| ***Alternative*** | ***Percent of years with peak Libby Reservoir elevation ≥ 2458 feet (1 ft from full pool elevation before July 31)*** | ***Percent of years with peak Libby Reservoir Elevation ≥ 2454 feet (5 ft from full pool elevation by July 31)*** |
|---|---|---|
| *LS1* | *6* | *12* |
| *LV1* | *12* | *31* |
| *LS2* | *6* | *10* |
| *LV2* | *10* | *31* |

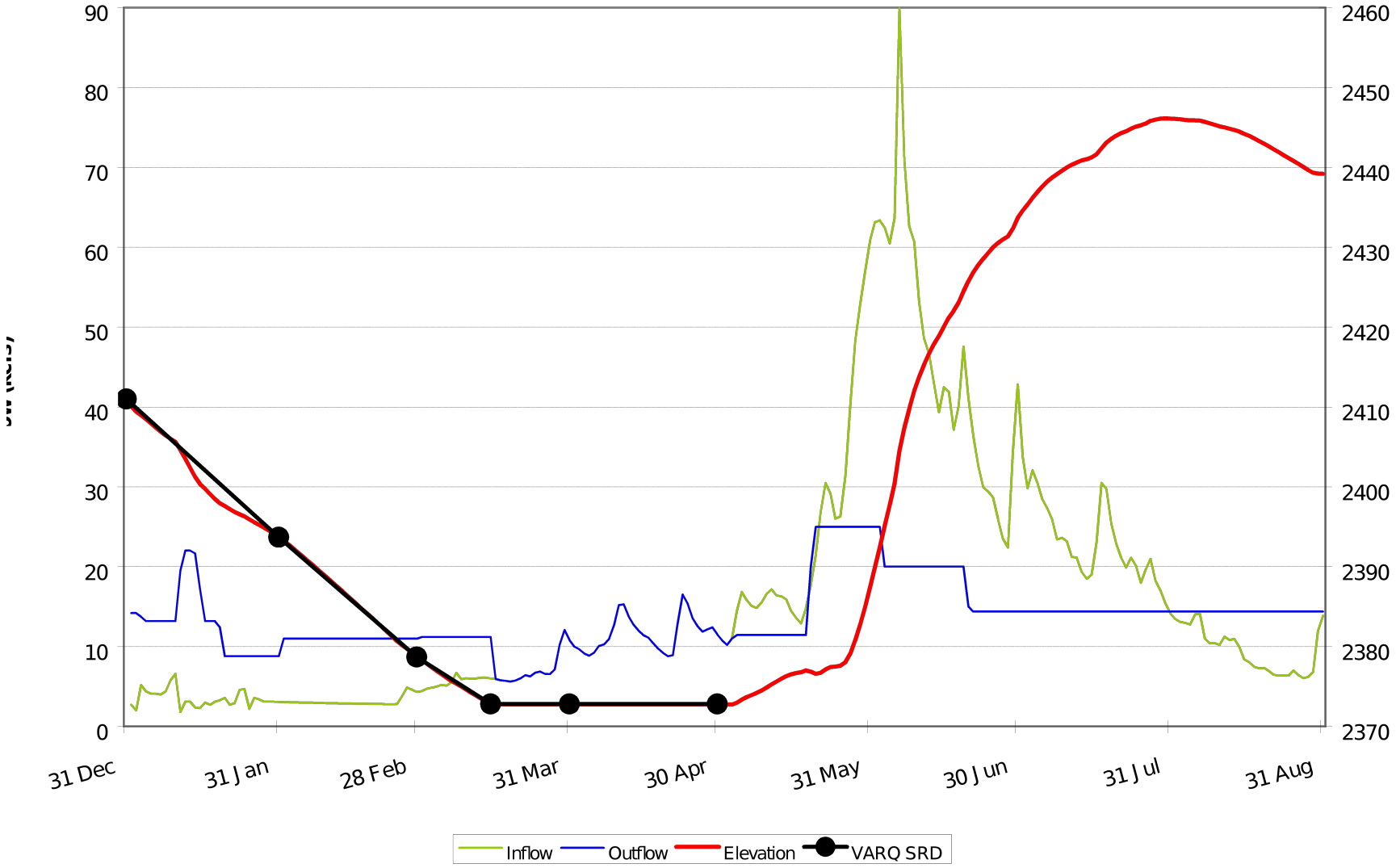
# Reduced Flexibility in 2007

- *May be increased chance of double peak*
- *Potential for spill to meet required VARQ outflow*
- *Potential spill to meet VARQ outflow if a unit or transmission outage occurs*

**ESP (1/23/07) INFLOWS USED STARTING 1/29/07**

**APR-AUG VOLUME=6.890 MAF**

# Libby Operations
## Based on Jan Final Forecast
## 6.955 MAF



**ESP (1/23/07) INFLOWS USED STARTING 1/29/07**

**APR-AUG VOLUME=6.589 MAF**

# Libby Operations
# Based on Feb Final Forecast
# 6.5 MAF